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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/829,129

04/21/2004

Chung-I Wang

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12/01/2006

PERKINS COIE LLP

PATENT-SEA

P.O. BOX 1247

SEATTLE, WA 98111-1247

EXAMINER

NGUYEN, DUNG T

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 12/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/829,129

Applicant(s)

WANG ET AL.

Examiner

Dung Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6, 8, 10-15, 17-19, 21-26, 28 and 30-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 10-15, 17-19, 21-26, 28 and 30-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

Applicants' amendment dated 08/30/2006 has been received and entered. By the amendment, claims 1-6, 8, 10-15, 17-19, 21-26, 28 and newly added claims 30-34 are now pending in the application.

#### *Claim Rejections - 35 USC § 103*

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-6, 8, 10-15, 17-19, 21-26, 28 and 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu, US Patent No. 6,549,257, in view of Takeda et al., US Patent No. 6,724,452.

Regarding the above claims, Liu discloses a liquid crystal display (LCD) device (figures 2-4) comprising:

- . two substrates (408 and 409);
- . a lower substrate including a multi domain pattern (202/301/421-423) as claimed, pixel electrode (405), a plurality of transistor (i.e., thin film transistor TFT) inherently forming in the LCD device for driving purposes, wherein a multi domain pattern composed of a frame pattern (i.e., peripheral portion) and a pixel driving pattern/contact pattern (i.e., inside portions)
- . an upper substrate including a plurality of strip patterns (303/411-414) as claimed, a common electrode (406).
- . a liquid crystal layer (407);
- . two polarizers (401 and 402).

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Although Liu does not disclose the strip patterns having a slit structure, Takeda et al. do disclose that a strip patterns can be formed as a bump and/or slit structure (see figures 12A-12C). Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to employ the Liu's strip patterns having slit structures as shown by Takeda et al., since it is a common practice in the art and the use of the protrusion (bump) and/or slit would be interchangeable in order to align liquid crystal molecules (i.e., forming a multi domain).

### ***Response to Arguments***

3. Applicant's arguments filed 08/30/2006 have been fully considered but they are not persuasive.

Applicants' arguments are as follow:

- a. the Liu's surrounding bumps and the central wall bump on two different substrates while all the bumps of the invention are formed on one substrate. The unexpected inventive step between Liu and the invention are nonobvious.
- b. The motivation to combine Takeda with Liu is inconceivable and absent in both disclosures.
- c. The present invention focuses on diving a single pixel into multi-domain and the added a slit structure to increase response time.

The Examiner's responses are as follow:

- a. As stated above, the bump (e.g. 301) can be a combination of a surrounding bumps and a central wall bump as claimed. In other words, the Liu's bump and the Applicant's multi-domain pattern would be the same as well.

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- b. The Examiner respectfully disagrees with Applicant's viewpoint. In particular, Takeda et al do show bumps and slips can be interchangeably formed over the substrate since both having a same function of aligning liquid crystal molecules in each domain. Therefore, the modification to Liu's bump by forming a slits (over the other substrate) would have been obvious.
- c. The combination of Liu and Takeda, as sated above, would have the same the Applicant's device as well. As a result, a response time would be increased as well. In response to Applicant's argument that the modification to Liu does not include certain features of Applicant's invention, the limitations on which the Applicant relies (i.e., domain in a single pixel) are not stated in the claims. It is the claims that define the claimed invention, and it is the claims, not specifications flat are anticipated or unpatentable. *Constant v. Advanced MicroDevices Inc.*, 7 USPQ 2d 1064.

#### ***Conclusion***

- 4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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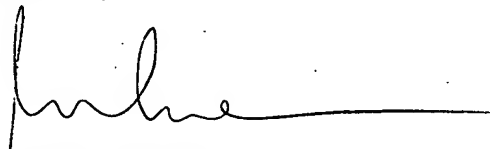
CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 571-272-2297. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DN  
11/27/2006



**Dung Nguyen**  
**Primary Examiner**  
**Art Unit 2871**